



Mathematics Vision Project
Curriculum Review Committee - Report
June 18, 2019

Section I:

Overview: Mathematics Vision Project (MVP) was selected as the curriculum to be implemented in Math 1, 2, and 3 in WCPSS after a comprehensive curriculum review process in 2016-2017. MVP was implemented in Math 1 classes during the 2017-2018 school year. Math 2 was implemented during the 2018-2019 school year. About half of all high schools volunteered to implement MVP in their Math 3 classes in 2018-2019. All teachers implementing MVP were provided with four days of face-to-face professional learning throughout the first year of implementation. Additionally, department chairs and all Professional Learning Team leaders of Math 1, 2, and 3 received updates to share with their respective teams. Central office staff were available to assist individual Professional Learning Teams and/or teachers upon request.

Purpose of the Curriculum Review Committee: The purpose of forming an internal Curriculum Review Committee was twofold. The primary purpose was to respond to parent formal complaints. The second purpose was to seek objective feedback from a varied group of stakeholders on the selection and implementation of MVP in the Wake County Public School System. All committee members had the opportunity to provide feedback on alleged policy violations, provide additional input, and suggest recommendations for improved implementation.

Review Committee Process: The Committee consisted of District central office staff, principals, and teachers. In addition to the Committee member review, the District also invited Wake County stakeholders (consisting of two parents, two students, and three members of the higher education/business community) to review and provide feedback. All individuals were specifically selected to represent a range of viewpoints about the curriculum. Those viewpoints included not only district staff, but also teachers, principals, parents, students, business interests and outside math experts.

Curriculum Review Committee Members

Dr. Edward McFarland, Chief Academic Advancement Officer
Marlo Gaddis, Chief Technology Officer
Drew Cook, Assistant Superintendent of Academics
Brian Pittman, Sr. Director High School Programs
La'Keisha Spruill – Roberts, Director, Intervention and Advanced Learning
Lauryn Mascarenaz, Director, Office of Equity Affairs
Jenny Ainslie, Special Education Math
Crystal Cabral, Elementary Math
Leigh Carter-Fiumara, ESL
Jonathan Enns, Principal, Fuquay-Varina High School
Carla Jernigan-Baker, Principal, Wake Young Women's Leadership Academy
Charlene Adams, Teacher, East Wake High School

Wake County Stakeholders

Dr. Jennifer Curtis, President of Emerald Education (Former NCDPI Math Section Chief)
Teresa Pierrie, Director of Programs Wake Ed Partnership
Dr. Erin Krupa, Assistant Professor Science, Technology, and Mathematics Education (NCSU)
Mollie Waddill, Parent, Broughton High School
Jennifer Hontz, Parent, Cary High School
Student A, Student, Athens Drive High School
Student B, Student, Panther Creek High School



Complaints Submitted by School

School Name	Number of Complaints Submitted
Apex Friendship HS	1
Athens Drive HS	2
Green Hope HS	8
Middle Creek HS	1
Sanderson HS	1
Wake Forest HS	1
Holly Grove MS	1
West Lake MS	1



Section II:

Historical Context: In Spring 2016, WCPSS contracted with a third party vendor to conduct a curriculum audit in both English Language Arts (ELA) and Math.

As part of this audit, **266** classrooms in **20** schools were observed and more than **1,189** student work samples were analyzed. In addition, auditors reviewed the WCPSS Curriculum Management Application (C-MAPP) materials for 3rd, 7th and 10th grades in ELA and Math and talked with over **250** teachers, **20** principals, **20** students and **16** district staff.

Findings from this audit revealed 78% of high school students were meeting the expectations of math assignments, however, only 19% of assignments were actually aligned to the rigor of the North Carolina math standard(s). Additionally, fewer than 10% of all high school math classrooms visited displayed evidence of the Standards for Mathematical Practice.

The large gap between the intent of math standards set by the state and evidence of them in WCPSS classrooms prompted WCPSS to begin the process of procuring a high school mathematics curriculum.

WCPSS followed a multi-phase approach to this curriculum procurement process, gathering feedback in a variety of forums from stakeholders throughout Wake County to select the best available core instructional materials for WCPSS students.

In addition to the data collected over these various forums, WCPSS considered data provided by the national organization EdReports. EdReports is designed to improve education by providing reviews of K-12 instructional materials and is dedicated to ensuring all students have access to high-quality instructional materials.



The EdReports review published in 2016 offered the following assessment:

"The instructional materials reviewed for the Mathematics Vision Project Integrated series meet expectations for alignment to the CCSS-M (Common Core State Standards - Math) for high school.

The materials meet the expectations for focus and coherence and attend to the full intent of the mathematical content standards.

The materials also attend fully to the modeling process when applied to the modeling standards.

The materials meet the expectations for rigor and the Mathematical Practices as they reflect the balances in the Standards and help students meet the Standards' rigorous expectations and meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice."

The table on the following page outlines the results of the EdReports review. The full report can also be accessed at this [link](#) or at the full web address:

<https://www.edreports.org/reports/overview/mathematics-vision-project-mvp-integrated-2016>



EdReports Review Summary	Indicator*	Score
Focus and Coherence: Materials are coherent and consistent with high school standards in order to be college and career ready.	1A - 1 F	15 out of 18 pts.
Rigor and Mathematical Practices: Appropriate attention is given to conceptual understanding, procedural skill and fluency within engaging tasks; Meaningfully connect to content standards and Standards for Mathematical Practice.	2A - 2D 2E - 2H	7 out of 8 pts. 8 out of 8 pts.
Usability: Materials are well designed and have effective structure and pacing; Materials support teacher learning and understanding of the standards; Offers teachers resources and tools to collect ongoing data; Supports teachers in differentiating instruction.	3A - 3E 3F - 3L 3M - 3Q 3R - 3Y	8 out of 8 pts. 4 out of 8 pts. 6 out of 10 pts. 5 out of 10 pts.

*Specific indicator references can be found in the full report at the link listed above.



Section III:

Costs: Because most of the costs associated with the MVP curriculum are found in teacher support, training and materials, those costs were among the items available to committee members. Costs to date are as follows:

Item	Timeframe	Cost
Professional Learning	June 2017	\$58,500.00
Professional Learning	July 2017-June 2018	\$310,050.00
Professional Learning	July 2018-June 2019	\$198,900.00
Homework Support Videos	3 year cost	\$222,283.00
Teacher Licenses Math 1	3 year cost	\$120,150.00
Teacher Licenses Math 2, 3	3 year cost	\$215,020.00
Printing Student Workbooks	Aug 2018 - June 2019	\$110,163.00
Curriculum Writers (alignment, enhancements, corrections)	August 2018 - June 2019	\$11,200.00

Approximate Cost Per Teacher: \$824.43

Approximate Cost of Workbooks Per Student: \$4.50



Section IV:

Academic Data (State Exams): The MVP curriculum was introduced into WCPSS schools in 2017-2018 in Math 1 classes. The table below shows the academic performance of Math 1 students on the statewide math exams in the two years before the curriculum was introduced and the first year of implementation. Preliminary data for 2018-2019 is not yet available.

The NC Department of Public Instruction reports two levels of math proficiency. Grade Level Proficiency measures the percent of students who scored at a level 3, 4 or 5 on the statewide exam. College and Career Ready measures the percentage of students who score at level 4 and 5 only.

While the 2017-2018 results indicate a modest improvement in student performance, additional years of data will be needed to confirm trends.

High School Math 1 Data

	2015-2016	2016-2017	2017-2018	Difference
Grade Level Proficiency	35.9	40.5	42.0*	1.5
College and Career Ready	23.2	26.4	28.3*	1.9

*MVP implementation



Academic data (Student Grades): In addition to data showing student performance on the statewide Math 1 exam, committee members reviewed average course grades for Math 1, Math 2 and Math 3.

The scores in the following table represent an average score for all students who took Math 1, Math 2 and Math 3 in the first semesters of 2016-2017, 2017-2018 and 2018-2019 as well as the third quarter of the same years. Data for the fourth quarter of the current school year is not yet available. The percentages represent the average grade for all students enrolled in the classes below.

Unofficial WCPSS High School District Grade Averages:

Course Name	16-17 1st Semester	17-18 1st Semester	18-19 1st Semester	16-17 3rd Quarter	17-18 3rd Quarter	18-19 3rd Quarter
Math 1	76.4%	75.5%*	74.8%*	74.2%	74.1%*	72.1%*
Math 2	72.1%	69.5%	70.3%*	70.5%	69.5%	69.2%*
Math 2 Honors	84.3%	84.4%	83.6%*	82.6%	82.1%	82.9%*
Math 3	73.0%	72.1%	72.7%	72.3%	71.4%	71.4%
Math 3 Honors	83.1%	84.4%	83.1%	83.0%	83.0%	82.5%

*MVP implementation



Section V:

Timeline: The following key dates provide a timeline beginning with the implementation of the state's new math standards in 2016 and ending with the release of the Curriculum Review Committee Report.

Date	Event
2016-2017	WCPSS implements the revised NC State Math Standards for NC Math 1, 2, and 3 (no longer Common Core State Standards) adopted by NCDPI
October 2016	WCPSS staff trained to use Instructional Material Evaluation Tool (IMET)
December 2016	Academics Staff review all submitted curricula resources using the IMET
January 2017	Analyzed data to determine top 2 possible solutions
February - March 2017	Field Test in select classrooms to receive teacher and student feedback; 4 Community Input Sessions (Attendees: 496 teachers, 71 principals and 58 parents/community members); Deep Dives with each vendor
April 2017	Analysis of all data and Futures Protocol to identify final recommendation
May 2017	Recommendation to implement MVP to BOE
June 2017	Professional Learning (PL) for Math 1 planned and communicated to schools
June 2017 - August 2017	PL for Math 1 teachers/administrators. Implementation of MVP in Math1



August 2017 - June 2018	Continued PL and support for Math 1 teachers; Planning for Math 2 and 3
June 2018 - August 2018	Professional Learning for Math 2 and 3 teachers
August 2018 - present	Implement MVP in Math 2; Continued PL for Math 1, 2 and 3 teachers
2018-2019 School Year	New Math 1 and 3 EOCs implemented by NCDPI, requiring renormed scores
February 20, 2019	Parent Information Session at Green Hope High School
March 1, 2019	FAQs provided to parents at Green Hope High School
April 8, 2019	Meeting with 5 parents representing Green Hope High School
April 10, 2019	First parent policy complaint submitted
April-May 2019	MVP Teacher Input Sessions conducted regionally
May 9, 2019	Meeting with internal Curriculum Review Committee
May 22, 2019	Deadline for Curriculum Review Committee to submit findings and recommendations
June 7, 2019	Letter to parents to communicate initial findings of Curriculum Review Committee
June 17, 2019	Parent meeting scheduled to share findings of Curriculum Review Committee
June 18, 2019	BOE meeting to share findings of Curriculum Review Committee



Section VI:

Results of the Curriculum Review Committee: Parents submitted formal complaints beginning April 10, 2019, alleging violations of two policies. While not required, an internal Curriculum Review Committee was formed to determine if policies were violated and what future actions, if any, might be recommended for the curriculum.

The committee held its first meeting May 9, at which time all reviewers were provided access to the complaints, supporting documents submitted by parents and documents provided by the school district.

Reviewers were given two weeks to individually analyze all documentation and provide feedback and recommendations. The results of the findings are listed below. They are organized as outlined in the complaints presented by parents.

Alleged Violation as Stated in the Parent Complaint	Was the policy violated?		
	Yes	No	Unsure
Violation 1: Use of MVP fails to provide students with a sound math education based upon the definition of a sound education provided by the NC Court in regards to the Leandro case (specifically "sufficient knowledge of fundamental mathematics").	5.3%	94.7%	0.0%
Violation 2: Instructional materials should also be appropriate for the maturity levels and abilities of the students, and address a spectrum of learning styles.	10.5%	68.4%	21.1%



Violation 3: The use of MVP materials and methodologies violates Section C, Policy 3200: b) the material's reliability, including the extent to which it is accurate, authentic, engaging, relevant, comprehensive and evidence-based.	10.5%	78.9%	10.5%
Violation 4: The use of MVP materials and methodologies violates Section C, Policy 3200: e) the material's provision of thoughtful supports and scaffolds to support all students in accessing the North Carolina standards.	10.5%	52.6%	36.8%
Violation 5: The use of MVP materials and methodologies violates Section C, Policy 3200,: "g) the supports provided for effective and sustainable implementation."	0.0%	89.5%	10.5%
Violation 6: The use of MVP materials and methodologies violates Section C, Policy 3200: "i) the price of the material weighed against its value and/or the need for it."	5.3%	84.2%	10.5%
Violation 7: The use of MVP materials and methodologies violates WCPSS Board Policy 3135; Regulation Code 3135 R&P Homework. Regulation Code 3135 R&P Homework Section II states, "A. The teacher will introduce a concept or skill, thoroughly explain the concept or skill, and provide guided practice before making a related homework assignment."	10.5%	68.4%	21.1%



Violation 8: The use of MVP materials and methodologies violates Regulation Code 3135-R&P Homework Section II: "B. Homework assignments shall be specific, within the student's ability and have clearly defined expectations."	5.3%	84.2%	10.5%
Violation 9: The use of MVP materials and methodologies violates Regulation Code 3135-R&P Homework Section III: "B. To evaluate the effectiveness of a homework assignment, the following questions might be applied: 1. Does the student possess the skills needed to complete the assignment?"	0.0%	89.5%	10.5%
Violation 10: The use of MVP materials and methodologies violates Regulation Code 3135-R&P Homework Section III: "D. Homework assignments will not require the use of books or materials which are not readily available in the home or accessible to the student."	10.5%	73.7%	15.8%

The committee found no policy violations. This conclusion was reached by a substantial to overwhelming majority in nine of 10 instances. In alleged Violation #4, where there was the greatest variance in findings, a simple majority still believed school board policy was followed correctly. This committee finding is similar to the EdReports review and consistent with WCPSS teacher feedback. It is, therefore, a current area of focus for the school system and will remain so moving forward.

It is noteworthy that no alleged violation was supported by more than two committee members and two alleged violations garnered no support. However, all members of the committee made recommendations for improving the implementation of MVP in the Wake County Public School

System. The recommendations focused on the need for more professional learning, increased communication, attention to monitoring, adjustments to implementation, and the development of additional supplemental support and resources mentioned above.

The raw data and all comments submitted by the members of the Curriculum Review Committee can be found [here](#) or at <https://bit.ly/2R8KYbg>.



Section VII:

Conclusion: The Curriculum Review Committee determined there were no violations of School Board policy and no violations of law. In addition, no member of the committee recommended removing MVP and replacing it with a new curriculum. Based on the feedback and recommendations from the Curriculum Review Committee, the Wake County Public School System will continue to implement MVP in all Math 1, 2, and 3 classes. WCPSS recognizes that there are additional areas of support necessary for teachers, students and parents. Based on the recommendations and feedback received, the District will provide additional supports for students, parents, and staff. Plans for the 2019-2020 school year include:

- Engaging a third party to independently evaluate the implementation of MVP in WCPSS and support the process of continuous improvement;
- Creating a comprehensive website on each school webpage to include curriculum information, unit overviews, video demonstrations, extra practice, and additional resources to support students with homework;
- Continuing to work with school administrators to monitor and support math curriculum implementation in schools;
- Monitoring and adjusting the math curriculum implementation plan by:
 - Ongoing review and analysis of student performance data in Math 1, 2 and 3;
 - Delaying district-wide implementation of MVP in Math 3. Implementation will be optional in 19-20 for schools that have not already implemented MVP in Math 3;
 - Working with teachers and District staff to develop curriculum resources to enhance MVP materials to support stakeholders (i.e., video support with examples and models of lessons, extra practice to support procedural fluency and mathematical understanding, essential vocabulary, assessment items);
 - Examining and, as needed, editing MVP materials for any alignment, typographical, and grammatical errors;
- Providing additional professional learning with a concentrated focus on:
 - Supports for all students and learning styles;



- Implementing MVP lessons with a balance of direct instruction, conceptual understanding, and procedural skill & fluency;
- Increasing outreach and communication through:
 - Chamber of Commerce;
 - Wake Education Partnership;
 - Community Information Sessions.

The school district would like to publicly thank Curriculum Review Committee members for their time and dedication to the task and to parents for bringing increased attention to the curriculum development process. While no policy violations were found, the review makes clear that more professional development for teachers and support materials for students is needed. This process is already underway and will continue in the months ahead.